UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
HUSSAIN, IMAD

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 December 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-22</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-22</u> is/are rejected.

7)☒ Claim(s) <u>1</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>08 December 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>25 May 2006</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Priority

1.   Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No.

PCT/GB04/02471, filed on 10 June 2004.

Claim Objections

2.   Claim 1 is objected to because of the following informalities: "comprises" should

read "comprising". Appropriate correction is required.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raj

Srinivasan (*RFC 1833: Binding Protocols for ONC RPC Version 2,* hereafter Srinivasan)

in view of Simson Garfinkel et al (Practical UNIX & Internet Security, hereafter

Garfinkel) and in further view of Bill Venners (*Finding Services with the Jini Lookup*

Service, hereafter Venners).

Regarding claim 1, Srinivasan discloses *a method of enabling a client, running*

on a first computing device that is connected to a second computing device, to

use a service on that second computing device ["client" and "remote procedure",

Page 14 Paragraph 1], *comprising the steps of:*

(a) *a service, installed on the second computing device, registering its*

published name ["transport address"] *with a service broker* ["lookup service"] *on*

that second computing device [Page 2 Paragraph 1];

(b) *the client sending a message to the service broker specifying the...*

service; wherein the published name of the service does not include *specifying*

the connection point address of that service [Page 2 Paragraph 1].

Srinivasan does not explicitly disclose that *the service broker starts up the*

service.

However, Garfinkel discloses that the service may be automatically started

when the request is received.

Srinivasan and Garfinkel are analogous art in the same field of endeavor

as both deal with RPC and service registration. It would have been obvious to a

person having ordinary skill in the art at the time the invention was made to utilize

the automatic process startup of Garfinkel for automatically starting processes in

the system of Srinivasan. One of ordinary skill in the art would have been

motivated to modify the system of Srinivasan with the automatic process startup

of Garfinkel because in doing so, the system would allow for starting services on

an on-demand basis.

Srinivasan-Garfinkel does not disclose that the client *specifies the name of the service* or that *the published name of the service conforms to a structured naming convention that uniquely identifies the service as a service from a particular vendor.*

However, Venners teaches that services are looked up by name and that service names ["service... type names"], [Page 7 Paragraph 6] conform to a structured naming convention that uniquely identifies the service as a service from a particular vendor [Page 8 Paragraph 2 (Item 1)].

Srinivasan-Garfinkel and Venners are analogous art in the same field of endeavor as both deal with network service registrars. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to utilize the naming scheme of Venners for service identification in the system of Srinivasan-Garfinkel. One of ordinary skill in the art would have been motivated to modify the system of Srinivasan-Garfinkel with the naming scheme of Venners because in doing so, the system would allow for identification with greater meaning and uniqueness [Venners: Page 8 Paragraphs 2 and 5].

Regarding claim 2, Srinivasan-Garfinkel-Venners teach that *the structured naming convention uses reversed domain information* [Venners: Page 8 Paragraph 2 (Item 1)].

Regarding claim 3, Srinivasan-Garfinkel-Venners teach that *the service broker*

uses a single well-known port number address so that the client needs only this

well known port number to send a message to the service broker [Srinivasan:

"well-known because it uses a fixed transport selector", "port 111 over TCP and

UDP", Page 2 Paragraphs 1 and 3].

Regarding claim 4, Srinivasan-Garfinkel-Venners teach that *the service obtains a*

connection point and informs the service broker of the connection point address

and the service broker then informs the client of the connection point address

[Srinivasan: Page 2 Paragraph 1].

Regarding claim 5, Srinivasan-Garfinkel-Venners teach that *the service broker*

informs the client of the connection point address and the client then uses that

address in communicating directly with the server [Srinivasan: Page 2 Paragraph

1].

Regarding claim 6, Srinivasan-Garfinkel-Venners teach that *the connection point*

address is a port number [Srinivasan: Page 11 Paragraph 5 (Port Mapper

Program Protocol) and Page 13 Paragraph 6 (PMAPPROC_GETPORT)].

Regarding claim 7, Srinivasan-Garfinkel-Venners teach that *if a service is*

required more than once, the server providing the service will not be re-started,

but instead the service broker uses cached address information [Srinivasan:

Page 9 Paragraphs 2-4 (the registration remains set until the program becomes

unavailable)].

Regarding claim 8, Srinivasan-Garfinkel-Venners teach that *when services*

register with the service broker, they register a version number to 'indicate the

version of the service that they are providing [Srinivasan: Page 13 Paragraph 4

(PMAPPROC_SET)].

Regarding claim 9, Srinivasan-Garfinkel-Venners teach that *the client can*

request a specific version of a named service [Srinivasan: Page 13 Paragraph 6

(PMAPPROC_GETPORT)].

Regarding claim 10, Srinivasan-Garfinkel-Venners teach that *the service broker*

enables multiple services [Srinivasan: "remote programs", Page 2 Paragraph 2]

installed on a single, second computing device [Srinivasan: "resides at the same

network address", Page 2 Paragraph 1] *to serve one or more external clients that*

are computers connected by a remote link such as a network data connection.

[Srinivasan: "transport" Page 2 Paragraph 1].

Regarding claim 11, Srinivasan-Garfinkel-Venners teach that *the service broker*

provides authentication information such that only authenticated external clients

can access services [Garfinkel: Section 19.2.2 RPC Authentication].

Regarding claims 12-22, the claims comprise substantially the same limitations

as claims 1-11, respectively. The same rationale for rejection is applicable.

Cited pertinent prior art

5.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure:

        a.   D'Amorim et al., *Designing Jini Distributed Services*. (Describes a client-

server framework for service usage via a service broker)

        b.   Eisler et al., *Managing NFS and NIS.* (Provides an overview of Remote

Procedure Call and the portmapper service broker)

        c.   Gilligan et al., *RFC 2553 Basic Socket Interface Extensions for IPv6.*

(Specifies the functionality of the getaddrinfo function to lookup a port by service name)

        d.   Hirsh, *US 7237257 Leveraging a Persistent Connection to Access a*

Secured Device. (Describes a service broker administered services platform)

        e.   Primak, *US 2002/0095488 System and Method for Discovering,*

Advertising, and Finding Networked Services Using Dynamic Directory. (Describes a

directory-based system for service access)

        f.   Sun Microsystems, Inc., *RFC 1050 RPC: Remote Procedure Call Protocol*

Specification (Specifies Remote Procedure Call protocol and portmapper service broker

operation).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Imad Hussain whose telephone number is 571-270-3628. The examiner

can normally be reached on Monday through Thursday from 0730 to 1700.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Beatriz Prieto can be reached on 571-272-3902. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you

would like assistance from a USPTO Customer Service Representative or access to the

automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/IH/
Imad Hussain
Examiner   /Beatriz Prieto/
                                                    Supervisory Patent Examiner, Art Unit 4117